

The Emergency Watershed Protection Program: An Arizona Success Story

Prepared by Bruce Gordon, District Conservationist, Whiteriver Field Office, with assistance from Arnold Pailzote, President, White Mountain Apache Natural Resource Conservation District, and Candy Lupe, Director, White Mountain Apache Tribal Watershed Program

During the Arizona Drought Emergencies of 1999 and 2000, the USDA-Natural Resources Conservation Service (NRCS) assisted the White Mountain Apache Tribe through the Emergency Watershed Protection (EWP) program. The EWP program was used to help the Tribe to reduce the threats to life and property caused by accelerated flooding and erosion on lands heavily impacted by prolonged drought.

Arizona Drought Emergency

In the summer of 2000, the Governor of Arizona, the White Mountain Apache Tribe, and other governmental entities issued declarations of a drought emergency. The state had experienced six consecutive years of below normal precipitation of which 1998-1999 was the lowest two-year period ever recorded. Stream flows were well below normal and the long-term forecasts were predicting below normal precipitation.

The impacts of the drought included loss of critical water supplies, reduced vegetative cover, and increased risk of erosion and flood damages to downstream communities. In response, the White Mountain Apache Tribe, and other sponsors throughout the state, requested assistance from NRCS through the EWP program.

White Mountain Apache Tribe Resources at Risk

The Carrizo Creek watershed, located on lands of the White Mountain Apache Tribe, is a major headwater area of the Salt River watershed above metropolitan Phoenix. This watershed provides economic and cultural values to the White Mountain Apache people for timber, range, wildlife, and other uses. The prolonged drought contributed to severe degradation of upper watershed conditions and stream function.

The Carrizo Creek channel was abrading and scoured to its gravel and cobble base by past floods. Little riparian vegetation remained to slow the flow of water and capture fine sediments. The reduced ability of the system to store water and release it slowly over time increased the potential for high intensity flooding to the community of Carrizo.

Emergency Treatment Applied

The Carrizo Livestock Association entered into EWP program contracts with NRCS. A majority of the contributing watershed was range land and the primary treatment measure used was deferred grazing. Implementation of deferred grazing was determined to be an effective method of reducing stress on watershed vegetative cover and stream corridors, and accelerating their recovery. The Carrizo Livestock Association successfully completed their EWP contracts and continued to defer grazing beyond the contract period.

As a result of the treatment applied, upper watershed grasses recovered and dense re-growth of riparian vegetation occurred along Carrizo Creek. Streamflows slowed during storm events and sediments were deposited along streambanks. Culturally significant riparian areas were allowed to recover. The risk of erosion and flooding damages to the community of Carrizo was reduced.



Carrizo Creek Vegetation - Before Treatment



Carrizo Creek Vegetation - After Treatment

